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Personal initiative training for small business owners

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ABSTRACT

Research shows that personal initiative is important for small business owners' success (Frese, 2009). An intervention study in Germany evaluated a 3-day personal initiative intervention program for small scale business owners. This intervention consisted of a training that taught a proactive, self-starting approach to planning, innovation, time management and goal-setting and the ability to overcome barriers. A before-and-after design was used for the training group ($N=36$); the dependent variable was employment growth which we also measured in a comparison group ($N=97$). Measures were ascertained before the intervention, directly afterwards and 1 year after the training. We found positive changes after the training and the participants of the training group employed about 20% more employees after the training than before or than existed in the comparison group. Positive effects occurred on all four of Kirkpatrick's (1975) evaluation levels: reaction, learning, behavior-based, and success measures.

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1. Introduction

Developing skills for high performance is a central area for industrial and organizational psychology and in entrepreneurship research. Studies on employees and entrepreneurs have shown that personal initiative is an important facet of performance (Tornau and Frese, 2013). Frese (2009) has argued that a central element of entrepreneurship is the active nature of the entrepreneur and he uses personal initiative to understand the implications of an active approach to entrepreneurship. We concentrate in this research on personal initiative which is characterized by a self-starting, proactive (long-term oriented) approach that is persistent in overcoming difficulties (Bindl and Parker, 2010; Frese and Fay, 2001).

This paper presents an intervention aimed at increasing personal initiative of owner/managers of firms and leading to positive performance effects for these firms. We believe it is important to be highly specific in an intervention and to be theory driven because normal entrepreneurship courses without a specific skills approach show usually low or no effect in meta-analyses (Bae et al., 2014; Martin et al., 2013). Our intervention focuses on competencies and skills related to the development of initiative. It attempts to increase innovativeness, proactive goal-setting and visions, proactive planning and customer relations, and time management. Innovativeness implies to be self-starting in implementing something new. Proactive goals and plans relate to future opportunities and problems. Time management is one aspect of proactive planning

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Table 1

Facets of action training (Frese et al., 2003; Frese and Zapf, 1994; Glaub et al., 2014; Semmer and Pfäfflin, 1978).

Using principles of action to develop an action-oriented mental model	An action oriented mental model: This cognitive representation is based on principles of actions ("rules of thumb") that are derived from scientific knowledge
Learning by doing	Active and exploratory approach to learning from action ^a guided by the principles of action; the cognitive apparatus is built for action; therefore, exercises have to be connected to principles of actions which can only be learnt, when connected to actions
Feedback	Both positive and negative feedback is provided by the trainer in a functional way ("your use of emphasis has been good, however, you need to use more emotional words to describe your product to convey your message to the customer better"). Negative feedback is given in contrast to classical learning theory on the basis that this feedback has a positive motivational and cognitive effect (understanding, how not to do certain things and being motivated that one still needs to improve skills); also important learning from errors
Supporting transfer	Transfer is part of training by designing exercises to be concerned with real life tasks (identical elements), by using principles of actions because they can be adjusted to real life tasks (principles of action), by encouraging participants to think of examples how they can use what they have learnt in training, by increasing motivation to transfer (application contract on when and how to use skills acquired in training)
Necessity to routinize behavior	Action theory (Frese and Zapf, 1994) argues that new skills developed during the training will compete with old skills that have been routinized. Therefore, routinization of the new behavior needs to be encouraged both in the exercises and afterwards

^a Action training is not the same as action learning (Conger and Benjamin, 1999; Revans, 1982); the major difference is that action training is based on scientific principles and does not encourage trial-and-error learning although both training concepts have an exploratory approach and learning by doing in common.

– planning of time and coping with lack of time. The training intervention uses an action training approach (cf. Table 1 for this approach). At the same time, the study done in a highly developed Western country serves as a generalization study to two other studies that have shown the efficacy of personal initiative training in entrepreneurship (Glaub et al., 2014; Solomon et al., 2013).

2. Personal initiative (PI) and owners' success

Personal Initiative (PI) is arguably at the core of what is demanded of successful business owners (Frese, 2009). PI-behavior characterized self-starting, proactivity, and overcoming difficulties (Frese and Fay, 2001). *Self-starting* implies that owners are not just waiting to see what others do, but start an action without being told or without an explicit role model. In contrast to employees, entrepreneurs need more personal initiative because they are not embedded in an organizational hierarchy or developed structures, standard operating procedures of a company like employees; thus there are fewer clear role requirements for entrepreneurs. Entrepreneurs need to pursue self-set goals that keep the owners ahead of their competitors, in terms of products, services, strategies to approach customers, getting information from customers, etc. A high degree of PI may be an important reason for first mover advantages (locally defined) (Lieberman and Montgomery, 1998). *Proactivity* implies a long-term focus (Grant and Ashford, 2008) which allows the entrepreneurs to recognize and exploit future opportunities; preparing for opportunities implies that one assembles resources now so that one is able to quickly make use of future opportunities (Dimov, 2007). Recognizing and exploiting opportunities are the essence of entrepreneurship (Shane and Venkataraman, 2000). The same applies for a proactive stance with regard to problems. Owners should prepare to deal with future problems now and should not wait until they have to deal with them. *Overcoming barriers or persistence* is usually necessary to reach one's goal. Persistence has been conceptualized to be an important part of entrepreneurship since Schumpeter described entrepreneurial industrialists (Schumpeter, 1935). Whenever new ideas are pursued, adversity needs to be overcome; particularly new goals do not always work, adjustments are necessary, and sometimes owners have to backtrack. Technical, bureaucratic, organizational, and customer related barriers may appear. In spite of these barriers, business owners should stay on track by persisting to pursue their goals.

Empirically, PI was significantly related to economic success in various studies in Africa, USA, and Europe (Spencer and Spencer, 1993; Glaub et al., 2014; Krauss et al. 2005; Solomon et al., 2013). Proactiveness (one component of PI) has been consistently linked to business performance in the literature on entrepreneurial orientation (Lumpkin and Dess, 1996; Rauch et al., 2009). Thus, it makes sense to put PI at the center of a psychological training for business owners.

3. Training intervention

We now introduce the training components, their relevance for small and medium-scale business owners and how they were trained (cf. Appendix for the training program; the order of description is not the order of presentation to participants).

3.1. Innovation

Innovation is the introduction of products, processes or procedures that are new to the context (West, 2002). PI implies innovation because self-starting implies to do something new (at least locally) and overcoming barriers refers to an implementation phase of doing new things. High competition, limited resources and a changing business environment require innovations. Owners can reduce high competition by developing market niches; niches are often new niches, at least locally. A changing business environment requires fast adoption and finding solutions to upcoming problems. But innovation is more than just reacting to changes. Through its proactive character it plays a key role in facing future markets and detecting and exploiting opportunities (Shane, 2003). Empirical evidence supports the role of innovativeness to business success (Rosenbusch et al., 2011).

3.2. Proactive goal setting

Specific and challenging goals have been shown to increase performance in organizational settings (Locke and Latham, 1990) by increasing persistence, directing attention, and mobilizing effort. Goal setting needs to be justified and one way to justify goals to one-self and to one's employees is by developing a vision for the firm and to communicate this vision. Baum et al. (2001) found significant causal effects of visions and communication of visions on venture growth. The concept of PI emphasizes the importance of self-starting goals, of long term goals and of thinking about long term problems and opportunities that need to be translated into goal setting (Frese and Fay, 2001). Combining this with the goal setting literature emphasis on specific and challenging goals (Locke and Latham, 1990) makes sense and is useful. Moreover, both goal setting and PI theory posit that self-efficacy is one of the prerequisites of following challenging goals (Speier and Frese, 1997) and it is important for business success of entrepreneurs (Hmieleski and Corbett, 2008; Rauch and Frese, 2007). Moreover, a vision helps in keeping the long term perspective into focus (Locke and Baum, 2007). The training module of proactive goal setting focused on developing specific, concrete, measurable, time-bound, realistic and challenging short- and long-term goals. Using these principles of goal setting is supposed to increase the participants' commitments to goals generated during training.

3.3. Proactive planning

Personal initiative is proactive and, therefore, requires proactive planning. Plans relate thoughts and actions and specify the steps to achieve a goal (Gollwitzer, 1999). Planning is proactive when it relates to future problems and opportunities and prepares for them now (Frese et al., 2007). Proactive planning should help the owners to be successful because planning increases the chance that people get started to put their goal into action and mobilizes extra effort (Gollwitzer, 1999), amplifies persistence or decreases distraction (Diefendorff and Lord, 2004) and leads to better knowledge on contingency conditions and time allocation to tasks, and to a clearer focus on priorities (Tripoli, 1998). Planning also helps to deal with the inherent insecurities of being a business owner by making good use of scarce resources. Studies show that proactive planning is effective for business owners, both in Africa and in Europe (Frese et al., 2002, 2007; Gielnik et al., 2015b, in press; Van Gelderen et al., 2000; Zempel, 1999). Planning should not be overly detailed but detailed enough to think about important issues that need to be taken care of, as well as contingencies, potential problems and plan Bs to overcome such problems (Honig, 2004; Mumford et al., 2002). Thus, back-up plans in case something goes wrong and flexible use of planning are important.

The module 'Planning' aimed to stress the importance of planning for business success, to provide knowledge about the different types of strategies, plan every day without going into too much detail, and allowing updates and changes; the participants generated a plan for their own business in the sense of a personal project (Little, 1983) for the next 4–6 months. To develop a good long term oriented personal project (we called it business project), the participants were asked to do a rudimentary SWOT (strengths, weaknesses, opportunities, and stress) analysis of their business (Jackson et al., 2003).

3.4. Time management

Time management is one aspect of proactive planning – planning of time and making best use of the scarce resource time. Owners of small businesses have to deal with high time pressure. Using time management, owners actively identify important tasks, set priorities and plan their daily business according to the importance of tasks. Since time management emphasizes “important” issues over “urgent”, there is a proactive component in time management. The training component 'Time Management' followed the traditional treatment of time management, for example emphasizing prioritizing. One way to prioritize is to use the Pareto principle to differentiate customers in A,B,C categories putting more effort into serving their best A-customers who make it possible to increase profitability. Research on time management is relatively rare—studies about the relation between time management and performance show equivocal results (Macan, 1996; Van Eerde, 2015).

3.5. Overcoming barriers and management of emotions

The need to overcome barriers often leads to frustration and one important function of the management of emotion is to

allow the owner to continue to achieve his or her goals even though he or she is deeply frustrated from bad business experiences or project failure (Shepherd et al., 2009). We used the coping concept by Lazarus (Lazarus and Folkman, 1984) and the rational emotive therapy approach (Ellis, 1962) to develop action principles that help the owners to deal with frustration and failure: appraisal processes are responsible for the emotional reactions that people show to these frustrating events and they can be influenced by a rational approach of keeping up problem oriented coping in difficult situations.

Ellis (1962) emphasized to keep up the idea of responsibility in difficult situations (and he was influential to develop the overcoming barriers part of the personal initiative concept, Frese and Fay, 2001). We used the ABC Model by Ellis (1962) to explain management of emotions: Activating events, Beliefs and emotional Consequences. Ellis argues that it is wrong to assume that emotions automatically produce emotions. Rather, there are mediating concepts – beliefs – that make a person emotional or not. Thus, beliefs are in the last analysis responsible for one's emotions. Entrepreneurs should not fall into the trap of catastrophizing and into cycles of negative self-blame when things went wrong. Rather they should rationally deal with the situation to keep up a mastery orientation. For example, an individual who believes that mistakes are a sign of incompetence feels depressed after he or she has made an error, while a person who believes that it is human to make mistakes will more likely use this situation as a learning experience. In this module, we presented difficult business-situations and discuss with the participants their individual interpretation of the situation and their beliefs.

3.6. Persuasive communication

Interviews aimed to examine the needs of business owners convinced us that we should add a module on persuasive communication because business owners are often required to convince customers of their products and services, banks and others to provide capital, employees to work for a common good (the vision). This training module is outside the theoretical purview of personal initiative and was only added to make it more attractive to the entrepreneurs. We based our module on Cialdini's book to develop and teach principles of actions for persuasive communication (such as reciprocity, consistency of message, social proof, scarcity, and providing balanced arguments) (Cialdini, 2001).

4. Action training

We used an action training approach described in Table 1 (Ford et al., 1997; Gielnik et al., 2015a) and included components of behavior modeling (Bandura, 1986; Latham and Saari, 1979) by giving examples of successful and less successful owners. The components of action training (Frese et al., 2003; Semmer and Pfäfflin, 1978) aim to develop an action oriented mental model with the help of action principles, to develop routines of the newly acquired behaviors, to learn by doing, to motivate by experiencing the difference between present state and future goals ('experiential method'), to provide feedback in training, and to support transfer – all described in Table 1.

5. Quasi-experiment

A non-randomized control group pre-test/post-test design was used to control for effects of maturation, history, and testing (Cook et al., 1990).

5.1. Sample and design

The data files of relevant organizations (chambers of commerce – membership is mandatory in Germany – and customers of a bank specializing in small business) were used to offer entrepreneurs from two East-German and two West-German cities to participate in the training. No further restrictions were provided (which meant that participants showed a wide range of the size of their firms starting with zero employees). Forty-nine people took up the offer to participate in the workshops¹ in the four cities and they paid a small fee for it (unfortunately, 12 participants of those turned out to be managers who were not owners of the business and they were, therefore, excluded from our analyses; we also excluded one outlier from the training group – this entrepreneur had 195 employees – at least 12 SDs more than the average of the others). Thus, there were 36 training participants for our analysis of training effectiveness. There were several measurement points – directly before (T1) and after the training (T2), 6 months after the training (T3), and one year after the training (T4). At each stage we lost a few respondents – this led to an *N* of 28 at T2 and T3. However, the major dependent variable – number of employees at T4 – was answered by all 36 participants (12 months after the training).

We were not able to enlist owners to volunteer for a control group (those not participating in the training, but willing to fill out the pre- and post- questionnaires). Thus, we could not do a randomized control group design. However, we randomly sampled a non-equivalent comparison group (*N*=97) from the same data files that had been originally used to recruit the training participants; for these we asked only the most important dependent variable – the number of employees at the two

¹ We thank Dipl.-Psych. Katrin Garmeister and Dipl.-Psych. Sonja Schilbach who did one-half of the trainings under the supervision of the first author.

points in time (T1 and T4).²

Average age of training participants was 41 years ($SD=9.96$ with a range from 25–63 years); 24% were females. Participants came from all lines of business, for example, information technology, hotel- and restaurants business, tourism, construction, retail/trade, and consulting. All were Germans. Education was high: 62% had a formal high school diploma that allowed them to enter the university (Abitur), and 46% had finished university. Most of the companies were either founded by the owner (59%), or taken over from family members (19%), or taken over from a former business partner (11%). Half of the companies had been founded with a business partner (54%). The starting capital was on average 49,000 EUR (range from 0 to 330,000 EUR). The owners of the training group had on average 11.48 employees ($SD=14.72$) before training with a range from 0 to 55 employees. The non-training comparison group had on average 11.37 employees per company ($SD=16.96$) with a range from 0 to 98.

5.2. Measures

We used the four level approach suggested by Kirkpatrick (Kirkpatrick, 1976) and Latham and Saari's (1979) although they were criticized (Alliger et al., 1997): (1) reaction measures, (2) learning measures, (3) behavior based measures and 4) success measures. Of particular importance is the fact that we were able to measure the last level of organizational success that is infrequently used in training research (Warr and Allen, 1999) but can be modeled well in the area of entrepreneurship.

5.2.1. Reaction measure training satisfaction

A 4-item satisfaction scale on content, delivery, exercises, and overall satisfaction with the training was developed for this study (Kunin faces ranging from -3 to $+3$). Wanous (1977) found the Kunin Scale (1955) to be the best measure of overall job satisfaction ($\alpha=.75$).

5.2.2. Learning measures

They were asked before and directly after the training: As we did not have a randomized control group, we differentiated between knowledge that was trained in the intervention (e.g., 'what is personal initiative?' or 'a goal should be easy – yes, no') and knowledge from the same entrepreneurship domain that was not trained (e.g., accounting, 'How do you describe cash flow calculation?—an open answer question format). The knowledge trained was supposed to change as a result of the training and the knowledge not trained was not supposed to change. This is a similar approach to Frese et al. (2003) to be able to test the difference between trained and untrained variables (Frese et al. called them control vs. experimental variables and suggested to use this approach when it was not possible to get a control group). Experimental knowledge questions were on goal setting, personal initiative, time management, and innovation. A few questions were open and their answers were coded by two coders (ICCs between .60 and .90).

5.2.3. Self-reported behavioral measures

We asked whether participants had implemented action principles six months after the training (at T3); utilizing Likert answer scales from 1 to 5 ("much less frequently now than before the training"=1, "about as frequently now as before the training"=3, "much more frequently now than before the training"=5); all of these *implementation questions* inquired on whether the participants had implemented the training content into their day-to-day work. The questions referred to *personal initiative implementation* ("I utilize personal initiative (more or less) now than before the training", "I approach problems (less actively, more actively) now than before the training", "I implement ideas (more or less) now than before the training", *innovation implementation* ("I implement new and creative ideas now (more or less) than before the training", and "I apply creativity techniques to collect creative ideas now (more or less) than before the training", "I invest (more or less) time now for the development of innovations than before the training", *goal setting, active planning and active feedback seeking implementation* "I set specific goals (more or less) now than before the training", "I set concrete goals for my employees (more or less) now than before the training" and "I plan things out in more detail (more or less) now than before the training (develop subgoals, bring the steps into a temporal sequence, think about a criterion where I stop, develop a plan B)", and *time management implementation*: "I prioritized goals (more or less) in terms of their importance rather than urgency now than before the training" and "I analyze my tasks now into A/B/C-tasks (A=very important, C=not important) now (more or less) than before the training".

Personal Initiative was measured before and after the training with the personal initiative questionnaire which has been shown to have good construct validity (Fay and Frese, 2001) (T1 $\alpha=.87$, T2 $\alpha=.78$).

5.3. Success measures

Success was measured by a growth measure – the number of employees before (T1) and one year after the training (T4). Growth measures are often viewed as the ultimate outcome in the entrepreneurship literature (Baron, 2007; Carland et al., 1984; Stevenson and Jarillo, 1990). Growth in number of employees is also useful because it is an objective measure that entrepreneurs readily report; accountancy type measures (such as profitability) are not readily reported by small business owners in Germany.

² We acknowledge that this is a weak design in the limitations section but provide arguments that the study is a useful generalization study

Table 2
Results for Chi²-tests for implementation of behavior 6 months after the training (T3).

	M	SD	Chi ²	df	Sign.
<i>Implemented personal initiative:</i>					
Utilized personal initiative	3.58	0.776	7.00	2	.030*
Active approach to problems	3.71	0.624	7.75	2	.020*
Implemented ideas	3.67	0.637	7.00	2	.030*
<i>Implemented innovation and creativity:</i>					
Used innovative ways more to produce product or offer service	3.71	0.806	9.00	3	.029*
Use of creativity techniques for collecting creative ideas	3.50	0.590	9.75	2	.007**
Investing time for innovations	3.67	0.816	10.33	3	.015*
<i>Implemented goal setting and planning:</i>					
Use of specific goals	3.75	0.676	5.25	2	.072
Setting of concrete goals for employees	3.86	0.655	6.00	2	.049*
Detailed planning	3.58	0.654	18.00	3	.000**
Active search for feedback	3.83	0.650	6.60	2	.036*
<i>Implemented time management techniques:</i>					
Prioritized goals	3.96	0.624	9.25	2	.009**
Analyzed tasks in important and not so important ones	3.54	0.588	10.75	2	.004**

* $p < .05$.

** $p < .01$.

6. Results

The *satisfaction* with the training was high with 1.5 in a scale from -3.0 to $+3.0$ (reaction measure). In terms of the *learning measures*, we differentiated between the experimental items (referring to knowledge taught in the training) and control items (referring to knowledge, not taught in the training). A multivariate analysis of variance with repeated measures showed that there was a high difference between the trained items and the control items (Wilks–Lambda $F = 150.15$, $df = 1$, $p = .000$, partial $\eta^2 = .777$) and a high increase of knowledge in the learnt items in comparison to no increase in those items that referred to knowledge not trained; there was a significant interaction between experimental and control items and repeated measures (highly significant interaction; Wilks–Lambda $F = 51.42$, $df = 1$, $p = .000$, partial $\eta^2 = .545$).

In terms of *self-reported behavior*, participants reported a high degree of implementation and utilization of the principles learnt in training in comparison to the time before the training (the Chi² tests were tested against equal distribution of values which assumes that all 6 answer categories were used equally). Table 2 shows that the participants reported values of 3 and above for all aspects (from 3.50 to 3.96 – values above 3 implied that these categories were used more frequently than before the training).

There was a higher degree of initiative after the training than before (not measured in the comparison group) (cf. Table 3). The success measure – increase of number of employees – showed that there was higher growth in the training group than in the comparison group (the interaction between group and time was significant (Wilks–Lambda $F = 32.108$, $df = 1$, $127 p = .000$). Comparing the growth in number of employees within the training group across time (Table 3) showed the number of employees to increase significantly from an average of 11.48 (at T1 before the training) to an average of 13.73

Table 3
Paired t -tests for initiative and for number of employees (comparison between T1 and T4).

	Mean		SD		t	df	Significance
	T1	T2/T4	T1	T2/T4			
Training group: PI	3.78	3.97 (T2)	0.564	0.512	-2.257	24	.015*
Training group: Number of employees	11.48	13.73 (T4)	14.72	15.70	3.709	31	.001**
Comparison group: Number of employees	11.37	11.16 (T4)	16.96	16.52	n.s.		n.s.

PI=Personal initiative: we only measured personal initiative in the training group.

* $p < .05$.

** $p < .001$ (one-sided).

(at T4, one year after the training) (*t*-test for dependent sample across time, $t=3.709$, $p < .001$, $df=31$). Thus, on average the firms added 2.25 employees as a result of the training.

7. Discussion

The training showed a uniform pattern of improvement. Moreover this effect appears for the four levels of training effectiveness (Kirkpatrick, 1975): Reaction, learning, behavioral and marginally significantly so for success measures. The use of a non-random control group allowed us to control for possible effects of history and maturation (Cook et al., 1990); thus general changes in the business environment and the economy or the effects of longer experience of running a business were controlled with our design, as these effects would have influenced both the training and the comparison groups in the same way. The most important success variable (increase in number of employees) was significantly different from T1 and was significantly different in its growth from the comparison group.

7.1. Strengths and limitations

Of course other potential threats of internal validity could not be controlled with our design, e.g., it is possible that there is a selection effects and that those who participated in the training were on a stronger growth trajectory than those who did not participate in the training (of course, both training and control group were sampled from the same population). This is one limitation that need to be acknowledged. However, the non-equivalent comparison group for the success variable at least allows to control for maturation and history effects which are particularly important in entrepreneurship because firms often mature over time (Bruederl et al., 1992). There are frequently clear history effects as a result of the economic cycle in which firms' success increases or decreases to some uniform degree (as the last deep recession has painfully shown). There are potentially social desirability effects in that trainees may have wanted to show their gratitude by providing more positive results in the perceived behaviors. However, the most important result – the increase in number of employees as a result of the training is not likely affected by gratitude.

Our study may be limited in its generalizability, particularly because of the small N. Fortunately, this study does not stand alone—a study with a randomized control group design with a larger sample showed highly similar results in Uganda (Glaub et al., 2014). Moreover, a similar training program in South Africa resulted in higher economic success for participants in the training, as well (Solomon et al., 2013). All of these studies showed an increase of personal initiative of the participants, although different measures were used. Thus, the effects of the training can generalize across different countries with different levels of economic development. The absolute growth by 2.25 employees on average in the training group is quite high and constitutes roughly a 20% increase of personnel in the firms of the trained owners.

The study longitudinal in nature. It is seldom that intervention studies utilize evaluation studies with a time lag of one year. On the other hand, it is precisely the long term perspective that one would hypothesize in this area – an increase of sales and in the number of employees should take a certain time to develop. The major strength of this study is that an intervention developed to increase personal initiative – a concept of great importance for entrepreneurship – showed clear effects in an objective variable of growth in a developed country.

7.2. Practical and research implications

The practical implications of our intervention are obvious – a short three-day psychological training for increasing the personal initiative of the owners may lead to higher growth of their firms. At the time of the study, there were 2,045,000 firms in Germany with 1 to 50 employees. If roughly 10% of the owners would take part in the training reported here, 200,000 owners would add approximately 400,000 more employees to their firms. We correct for displacement effects (crowding out effects because trained firms compete more successfully with other firms reducing the success of other firms) assuming only half the effect size. This implies that the add-on effect of new jobs would be roughly 200,000.³ If we make the realistic assumption that the training for each person costs approximately 1000 EUR, this would mean that for each 2000 EUR investment, there would be an additional employment of one person (a small investment to reduce unemployment by one person).

A few implications for entrepreneurship research are also important: First, entrepreneurship research should stop using omnibus approaches of interventions and include all potential predictors of entrepreneurs; it would be useful to develop short interventions that are theoretically relatively cohesive. Second, if short term interventions are reliably successful, research should examine which ingredients of the interventions produce entrepreneurial growth. Third, recent reviews entrepreneurship courses (e.g., at a university) have been shown to ineffective (Bae et al., 2014) to enhance start-up motivation; maybe this is due to their general nature. More specific and highly targeted and theoretically more cohesive programs, such as the current one, may be more useful. Fourth, models of firm growth may want to include participation in potential interventions for the owners to develop better knowledge; this may also be necessary to reduce the risk of underspecifying their models. Finally, personal initiative may be an area

³ In a different study setting – developing countries, these crowding out effects (negative spillover effects) were shown to be relatively low to negligible (McKenzie and Puerto, 2014).

that should be considered for inclusion in courses and interventions.

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Appendix PI – Training

Day 1	Method/tools
Introduction	Introduction lecture
GOAL SETTING VIA VISION and PERSUASION	Lecture on action principles Developing a vision for firm; Presenting this vision to stakeholders (including employees)
Developing a vision	Self-assessment questionnaire
Communicating a vision as leadership (relationship to charisma)	Practical role play and feedback through trainers and participants
Persuading (e.g., a customer)	Lecture on principles of actions Role play
Day 2	
INNOVATION	Lecture: action principles Group work, brainwriting
Exercises: creativity	
Theory: innovation	
Review of contents, feedback by participants	Importance of foresight and creative reaction to environmental discontinuities (group work)
INNOVATION Part II	
2 Exercises: innovation in own business	
2 Exercises: creativity	
PROACTIVE PLANNING I	Lecture on action principles single and group work
Theory: action strategies	Work sheet, discussion
Exercise: working out action principles	
Self-rating: strategies	
Exercise: plan for own Business, SWOT analysis	
PERSONAL INITIATIVE Part I	Lecture on actions principles Case studies, discussion
Exercise: working out action principles	Self-assessment questionnaire
Theory: personal initiative	Work sheet, single and group work
Self-rating: personal initiative	
3 Exercise	
Day 3	
GOAL SETTING PART II and FEEDBACK	Lecture on action principles Experiencing goal setting Questionnaire and feedback during group exercises
Theory	
Exercise: working out action principles	
Self-rating: goal setting	
2 Exercises: setting business goals	
PLANNING Part II	Developing a business plan for next 4 – 6 months Work sheets and exercises
Exercise: first step of 4-6 months plan	
TIME MANAGEMENT	Lecture on action principles Self-assessment questionnaire
Theory: Time management	
Presenting action principles	Work sheets, discussion
Self-rating: time management	ABC analysis, urgent vs. important
2 Exercises: priority placement	
OVERCOMING BARRIERS and MANAGEMENT OF EMOTIONS	Lecture on principles of actions Examples, individual and group work, how to deal with frustrations and with errors
FINAL PART summary of contents	Work sheet, Choosing implementation-partner Lecture and pep talk
Application contract	Work sheet
Feedback by participants	
Official end	

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